How does SEADAS 4.5 compare with SEADAS 4.1?

The plots given in the link show the scatter plot of SeaWiFS derived chlorophyll processed using the old seadas4.1 vs. the newer seadas4.5 algorithm.

The plots also show the differences where the Stumpf algorithm has been specifically used for both the atmospheric correction as well as the chlorophyll algorithm vs. the old default Stumpf algorithm with seadas4.1

Hopefully, these plots will give a measure of the changes ushered in with the newer SEADAS version to be accounted for when comparing newer products with those processed with the older versions of SEADAS.

In general the pixel by pixel comparison does not filter out any data as long as valid chlorophyll retrieval is made. (Range 0.001 – 100μgL^{-1}) For each frame the top left corner shows this plot using all available retrievals.

The top right corner plot shows those pixels where the named flag is set to 1 indicating the pixels where the flag condition is satisfied and to be masked in the next plot.

The bottom left plot shows all retrievals where the flag condition mentioned is applied. Hence this shows the effect of applying the flag as criteria to filter the data.

The bottom right plot shows the histograms of the retrievals (all data) for the two cases being compared here. (Seadas 4.1 vs. 4.5)

Observation:

- OC4 algorithm shows maximum differences in the mean & median of the distributions in chlorophyll in comparison to using the RS algorithm with seadas4.5

- Seadas4.5 has a better range of Chlorophyll values stretching all the way to 0.01

Note: *SEADAS 4.1 was used since Yr2002 OCPOP decision to switch over the atmospheric correction algorithm for SE & GoMex regions to Stumpf's algorithm.*